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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,226	01/16/2002	Xi Shen	8895	4379

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EXAMINER

DESHPANDE, KALYAN K

ART UNIT	PAPER NUMBER
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3623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/046,226	Applicant(s) SHEN ET AL.	
	Examiner Kalyan K. Deshpande	Art Unit 3623	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-8,10-14 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) 1,3-8 and 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Introduction***

1. The following is a non-final office action in response to the communications received on October 28, 2006. Claims 16-21 are now pending in this application.

### ***Election/Restrictions***

2. Applicant's election without traverse of claims 16-21 in the reply filed on October 28, 2006 is acknowledged.

### **Response to Amendments**

3. Applicants' amendments to claims 16-19 are acknowledged.

### ***Response to Arguments***

4. Applicants' arguments filed on October 28, 2006 have been fully considered but are not found persuasive. Applicants' argues that Jones fails to teach the recited limitations of amended claim 16.

In response to Applicants' argument that Jones fails to teach the recited limitations of amended claim 16, Examiner respectfully disagrees. As per claim 16, Jones teaches "a method of identifying highly valued customers using a Customer Value Metric Model comprising: determining a frequency value for each customer, said frequency value comprising a measurement of activities for each customer within a specified time period" (see column 13 line 19-45; where the frequency value for each customer is incorporated. The system further uses a frequency value to determine whether a customer is likely to spend over a specific period of time.), "determining a net revenue contribution value for each customer, said net revenue contribution value

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comprising a dollar value measurement for each customer's contribution to a bottom line within said specific time period" (see column 13 line 19-45; where the customer transaction history is used. A customer transaction history gives information as to the total net revenue received from a customer. Furthermore, a non-linear score is determined how much the customer has spent. This factor is the same as a customer's contribution to the bottom line.), "scoring the frequency value and net revenue contribution value for each customer" (column 14 lines 8-65; where a customer value scoring is done using the customer transaction history. The customer transaction history contains both the frequency value and the revenue contribution value.), and "identifying the highly valued customers by ranking the customers based on the scores" (column 14 lines 8-65; where a customer value scoring is done using the customer transaction history. The customer transaction history contains both the frequency value and the revenue contribution value. Those customers with high customer value scores can be identified as highly valued customers.). Jones fails to explicitly teach a method of "identifying highly valued customers of an airline" and airline specific limitations of "flight activities" and "the airline's bottom line" recited in claim 1. However, Jones discloses a method of targeted marketing that can be applied to a variety of industries, regardless of the intended field of use of the method. Although Jones teaches a method of targeted marketing, the system has utility in other applications (see column 16 lines 31-35). The system being adapted to marketing customers of an airline and incorporating the factors of a "flight activities" and "airline's bottom line" is irrelevant since the intended use does not change the overall functionality of the system. The

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intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill in the art to use the Jones system at a method of “identifying highly valued customers of an airline” and incorporating the factors of a “flight activities” and “airline’s bottom line” because Jones system is designed to be used to identify targeted customers regardless of the intended use.

#### ***Claim Rejections - 35 USC § 112***

5. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites “the airline’s bottom line”. There is no antecedent basis for this limitation.

#### ***Claim Rejections - 35 USC § 101***

6. Under the statutory requirement of 35 U.S.C. § 101, a claimed invention must produce a useful, concrete, and tangible result. For a claim to be useful, it must yield a result that is specific, substantial, and credible (MPEP § 2107). A concrete result is one that is substantially repeatable, i.e., it produces substantially the same result over and over again (*In re Swartz*, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000)). In order to be tangible, a claimed invention must set forth a practical application that generates a real-world result, i.e., the claim must be more than a mere abstraction (*Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77). Additionally, a claim may not

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preempt abstract ideas, laws of nature or natural phenomena nor may a claim preempt every "substantial practical application" of an abstract idea, law of nature or natural phenomena because it would in practical effect be a patent on the judicial exceptions themselves (*Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972)). (Please refer to the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" for further explanation of the statutory requirement of 35 U.S.C. § 101.).

Claim 16 merely recites the manipulation of an abstract idea and fails to produce a tangible result. Claim 16 recites "identifying the highly valued customers by ranking the customers based on the scores", which is a mere abstract idea that does not produce real-world results, thus the result of this step is not tangible. Because the results produced by these steps are not tangible, claim 16 is considered to be directed toward non-statutory subject matter.

Claims 17-21 recite subject matter already addressed by the 35 U.S.C. 101 tangibility rejections of claim 16; therefore the same rejection applies to these claims.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (U.S. Patent No. 6925441).

As per claim 16, Jones teaches:

A method of identifying highly valued customers using a Customer Value Metric Model comprising:

determining a frequency value for each customer, said frequency value comprising a measurement of activities for each customer within a specified time period (see column 13 line 19-45; where the frequency value for each customer is incorporated. The system further uses a frequency value to determine whether a customer is likely to spend over a specific period of time.);

determining a net revenue contribution value for each customer, said net revenue contribution value comprising a dollar value measurement for each customer's contribution to a bottom line within said specific time period (see column 13 line 19-45; where the customer transaction history is used. A customer transaction history gives information as to the total net revenue received from a customer.

Furthermore, a non-linear score is determined how much the customer has spent. This factor is the same as a customer's contribution to the bottom line.);

scoring the frequency value and net revenue contribution value for each customer (column 14 lines 8-65; where a customer value scoring is done using the customer transaction history. The customer transaction history contains both the frequency value and the revenue contribution value.); and

identifying the highly valued customers by ranking the customers based on the scores (column 14 lines 8-65; where a customer value scoring is done using the customer transaction history. The customer transaction history contains both the

frequency value and the revenue contribution value. Those customers with high customer value scores can be identified as highly valued customers.).

Jones fails to explicitly teach a method of “identifying highly valued customers of an airline” and airline specific limitations of “flight activities” and “the airline’s bottom line” recited in claim 1. However, Jones discloses a method of targeted marketing that can be applied to a variety of industries, regardless of the intended field of use of the method. Although Jones teaches a method of targeted marketing, the system has utility in other applications (see column 16 lines 31-35). The system being adapted to marketing customers of an airline and incorporating the factors of a “flight activities” and “airline’s bottom line” is irrelevant since the intended use does not change the overall functionality of the system. The intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill in the art to use the Jones system at a method of “identifying highly valued customers of an airline” and incorporating the factors of a “flight activities” and “airline’s bottom line” because Jones system is designed to be used to identify targeted customers regardless of the intended use.

As per claim 17, Jones teaches:

The method as claimed in claim 16, comprising: ranking the customers based on the frequency value score (see column 13 line 19-45; where the frequency value for each customer is incorporated.).

As per claim 18, Jones teaches:



The method as claimed in claim 16, comprising: ranking the customers based on the net revenue contribution value score (see column 13 line 19-45; where the customer transaction history is used. A customer transaction history gives information as to the total net revenue received from a customer.).

As per claim 19, Jones teaches:

The method as claimed in claim 16, further comprising: sorting the scores based on score pairs including frequency value and net revenue contribution value (column 14 lines 8-65; where a customer value scoring is done using the customer transaction history. The customer transaction history contains both the frequency value and the revenue contribution value.).

As per claim 20, Jones teaches “sorting matching score pairs based on net revenue contribution value” (see column 15 lines 35-61; where the data is sorted based on the net present value. The net present value incorporates the customer value score and the transactional history score. The transactional history score incorporates the revenues generated from the customer.) and “ranking the customers based on the assigned numerical value to identify the highly valued customers” (column 14 lines 8-65; where a customer value scoring is done using the customer transaction history. The customer transaction history contains both the frequency value and the revenue contribution value. Those customers with high customer value scores can be identified as highly valued customers.). Jones fails to explicitly teach “dividing the customers into N groups” and “assigning a numerical value 1-N to each group”. It is old and well-known in the art to divide customers in to segments and assign a numerical value to the

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group or segment. The advantage of these steps is that it enables promoting specific products to specific customers, thereby enhancing the accuracy of the marketing. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to modify Jones to "dividing the customers into N groups" and "assigning a numerical value 1-N to each group" in order to enable promoting specific products to specific customers, thereby enhancing the accuracy of the marketing, which is a goal of Jones (see column 4 lines 43-45).

As per claim 21, Jones fails to explicitly teach "wherein N is 100". As discussed above, it is old and well-known in the art to divide customers in to groups and assign the groups a numerical value; therefore it is old and well-known in the art to specifically divide customers in to 100 groups. The advantage of these steps is that it enables promoting specific products to specific customers, thereby enhancing the accuracy of the marketing. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to modify Jones to incorporate "100 groups" in order to enable promoting specific products to specific customers, thereby enhancing the accuracy of the marketing, which is a goal of Jones (see column 4 lines 43-45).

### ***Conclusion***

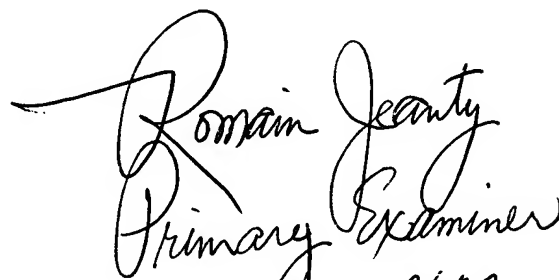
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalyan K. Deshpande whose telephone number is (571) 272-5880. The examiner can normally be reached on M-F 8am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
kkd

  
Primary Examiner  
Art Unit 3623